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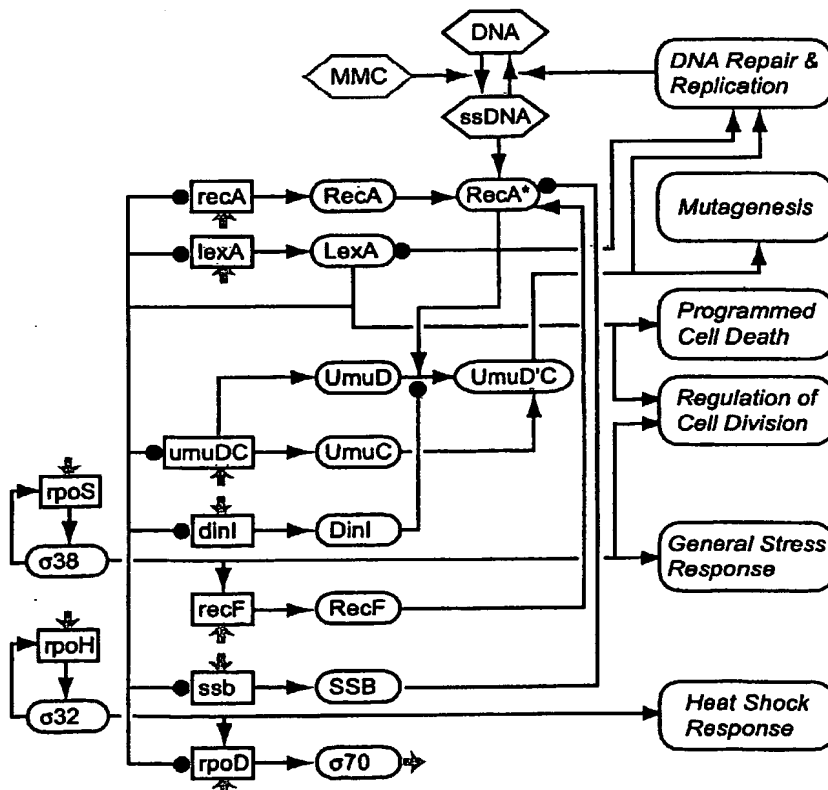
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(54) Title: SYSTEMS AND METHODS FOR REVERSE ENGINEERING MODELS OF BIOLOGICAL NETWORKS



(57) Abstract: The present invention provides methods and accompanying computer-based systems and computer-executable code stored on a computer-readable medium for constructing a model of a biological network. The invention further provides methods for performing sensitivity analysis on a biological network and for identifying major regulators of species in the network and of the network as a whole. In addition, the invention provides methods for identifying targets of a perturbation such as that resulting from exposure to a compound or an environmental change. The invention further provides methods for identifying phenotypic mediators that contribute to differences in phenotypes of biological systems.